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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,774	07/14/2003	Bill Nguyen		6046

7590 05/24/2004
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15233 VENTURA BLVD.
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EXAMINER	
QUARTERMAN, KEVIN J	
ART UNIT	PAPER NUMBER

2879

DATE MAILED: 05/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicant N .

10/618,774

Applicant(s)

NGUYEN, BILL

Examiner

Kevin Quarterman

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Priority Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Kashiwara (US 5051651).
3. Regarding independent claim 1, Figure 30 of Kashiwara shows a spark plug comprising an elongated electronically non-conductive body (2); an igniter electrode (4) supported by the non-conductive body and having a distal tip extending into a burn zone; an elongated conductive body (1) surrounding the non-conductive body and having a horn nozzle (6) surrounding the tip in spaced-apart relationship; and at least two posts (5) joining the horn nozzle with the conductive body and to hold the horn nozzle in spaced-apart relationship with respect to the conductive body to define the burn zone.
4. Regarding claim 2, Figure 30 of Kashiwara shows vent slots (14) provided in the burn zone by the posts.
5. Regarding claim 3, Figure 30 of Kashiwara shows the horn nozzle being circular (Abstract) having a conical inner side terminating adjacent the tip with a reduced throat diameter and terminating exteriorly with an enlarged mouth of greater diameter than the diameter of the throat diameter.

6. Regarding claim 4, Figure 31 of Kashiwara further shows the distal tip of the igniter electrode being spherical and partially residing within the throat of the horn nozzle.

7. Regarding claim 5, the igniter electrode of Kashiwara is bendable for adjustment with respect to distance from the horn nozzle with the throat.

8. Regarding independent claim 6, Figure 33 of Kashiwara shows a spark plug comprising a non-conductive body (2); a conductive body (1) supporting the non-conductive body; an igniter electrode (4) carried by the non-conductive body having an exposed distal tip of rounded configuration; a ground electrode (6) supported by the conductive body and having a horn nozzle with a frustum-conical passageway (7) defined by a tapered inner wall (12) leading from a mouth to throat partially encircling the distal tip of the igniter electrode; and a pair of posts (5) integrally connecting the non-conductive body with the horn nozzle to define venting slots (14) between the conductive body the and horn nozzle.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Suzuki (US 5103136) discloses an igniter plug. Landon (US 6670740) discloses a high electrical spark plug.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571) 272-2461. The examiner can normally be reached on M-TH (7-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joseph Williams
Joseph Williams

Kevin Quarterman
Examiner
Art Unit 2879

kq *KQ*
17 May 2004

Nimesh Patel
Supervisory Patent Examiner
Art Unit 2879